

WHAT IS CLAIMED

1. For use with a multinode cooperative telecommunication network, wherein a respective node is operative to service multiple telecommunication devices coupled to said respective node, each communication device having an extension that is used in the course of routing a call from a calling communication device to a called communication device, a method of routing a call from a calling communication device at a first node to a called device at another node comprising the steps of:

(a) transmitting a query message from said first node to all other nodes of said network, said query message being operative to determine whether a respective node receiving said query message is coupled to said called device;

(b) at a second node to which said called device is coupled, transmitting a reply message to said first node indicating that said second node is coupled to said called device; and

(c) in response to receipt of said reply message by said first node, routing said call from said first node to said second node, so that said second node may complete the connection of said call to said called device.

2. The method according to claim 1, wherein step (a) includes the precursor step of causing said first node to

examine an associated call plan therefor to determine whether said first node is coupled to said called device.

3. The method according to claim 1, wherein step (b) comprises at one or more third nodes to which said called device is not coupled, ignoring said query message, so that no reply message is transmitted therefrom.

4. The method according to claim 1, wherein each node comprises a private branch exchange.

5. A method of operating a multinode cooperative telecommunication network comprising a plurality of nodes coupled to one another by way of an internode communication path, each node being operative to service multiple telecommunication devices coupled thereto, each communication device having an extension that is used in the course of routing a call from a calling communication device to a called communication device, said method comprising the steps of:

(a) in response to the placement of a call from a communication device coupled to a first node, causing said first node to examine an associated call plan therefor to determine whether said first node is coupled to said called device;

(b) in response to said first node determining that said first node is not coupled to said called device,

transmitting a query message from said first node to all other nodes of said network, said query message being operative to inquire whether a respective node receiving said query message is coupled to said called device;

(c) at a second node to which said called device is coupled, transmitting a reply message to said first node indicating that said second node is coupled to said called device; and

(d) in response to receipt of said reply message by said first node, routing said call from said first node to said second node, so that said second node may complete the connection of said call to said called device.

6. The method according to claim 5, wherein step (c) further comprises, at one or more third nodes to which said called device is not coupled, ignoring said query message, so that no reply message is transmitted therefrom.

7. The method according to claim 5, wherein each node comprises a private branch exchange.

8. A method of operating a multinode, cooperative, restricted access telecommunication network comprising a plurality of nodes coupled to one another by way of an internode communication path, each node being operative to service multiple telecommunication devices coupled thereto, each communication device having an extension that is used

in the course of routing a call from a calling communication device to a called communication device, said method comprising the steps of:

(a) storing at each node a call plan that contains only communication device extensions that are coupled to said each node;

(b) in response to the placement of a call from a communication device coupled to a first node, causing said first node to examine an associated call plan only therefor, so as to determine whether said first node is coupled to said called device;

(c) in response to said first node determining that said first node is coupled to said called device, routing said call to said called device, but otherwise transmitting a query message from said first node to all other nodes of said network, said query message being operative to inquire whether a respective node receiving said query message is coupled to said called device;

(d) at said all other nodes of said network examining respective call plans only therefor, so as to determine whether said called device is contained therein;

(e) at only that one of said all other nodes of said network to which said called device is coupled, transmitting a reply message to said first node indicating that said second node is coupled to said called device; and

(f) in response to receipt of said reply message by said first node, routing said call from said first node to

said second node, so that said second node may complete the connection of said call to said called device.

9. The method according to claim 5, wherein step (e) further comprises, at one or more third nodes to which said called device is not coupled, ignoring said query message, so that no reply message is transmitted therefrom.

10. The method according to claim 8, wherein each node comprises a private branch exchange.